



BALLANCE, STEWART: THE HEALING OF NERVES. 337

A PRACTICAL TREATISE ON SMALLPOX. By GEORGE HENRY FOX, A.M., M.D., Consulting Dermatologist to the Health Department of New York City, with the collaboration of S. D. HUBBARD, M.D., S. POLLITZER, M.D., and J. H. HUDDLESTON, M.D. Illustrated by colored photographs from life. Philadelphia and London: J. B. Lippincott Co., 1902.

WELL-MADE photographs of properly selected subjects render most valuable aid in the recognition of many cutaneous affections; indeed, in many cases they are more instructive than pages of the best text.

In this treatise an attempt is made to present by the aid of photography one of the most important of the eruptive diseases. In a series of fifteen plates, reproductions from photographs from life, the various eruptive stages of variola are presented, while a sixteenth is devoted to vaccination and varicella. Most of the portraits are colored, which—as a rule, to which, however, there are some exceptions—adds to their realistic appearance. Those representing the vesicular and pustular stages are beautiful examples of what photography is capable of in the way of accurate representations of cutaneous eruptions; it would be difficult, indeed, to improve upon them. But the photographs of the earliest stages of the disease are much less satisfactory, not through any lack of skill in the photographer, but because of the unfortunate limits of photography, the erythematous and papular lesions present at this period of the disease not lending themselves well to photographic reproduction. This is the more to be regretted because it is just in the early days of the malady that doubt and error in diagnosis are most apt to arise.

The text, which is intended to be practical rather than exhaustive, is clear and concise, the section of diagnosis being especially so. The occurrence of the lesions of smallpox on the palms and soles is especially emphasized as an important diagnostic symptom.

Although the very best illustrations possible will always be found inadequate substitutes for bedside experience, yet plates such as these are sure to be of great service to the inexperienced who have not had the opportunity to study smallpox in the living subject, and to these this illustrated treatise is heartily recommended. M. B. H.

THE HEALING OF NERVES. By CHARLES A. BALLANCE, M.S., F.R.C.S., and PURVIS STEWART, M.A., M.D., M.R.C.P. Illustrated by 16 plates and 1 figure in the text. London: Macmillan & Co.

THIS book is based on experimental sectioning of nerve trunks in monkeys, dogs, and cats, and on a study of nerves obtained during operations on human beings for the relief of injuries. The problem the authors consider is the process of degeneration and regeneration in a peripheral nerve after injury, with and without immediate or late suture, and the changes which occur in nerve grafts. The question is one of great scientific interest, and the carefully conducted experiments detailed by the authors go far to prove that the theory of regeneration now most popular is not correct. There are two theories as to nerve regeneration. The first is that it is central—that is, that the nerve axis cylinders which appear in the distal segment are direct outgrowths from

those in the central segments. This is the older and more popular theory. The "peripheral" theory maintains that the new fibres in the distal segment are formed from pre-existing cells in the distal segment itself. This is the opinion reached by the authors of this book. Their conclusions have an important bearing on the truth or falsity of the neuron theory, because if that theory be true regeneration ought to be impossible in a nerve trunk severed from its trophic centre. Since such regeneration does occur, our authors hold that the neuron theory, in so far at least as it applies to the peripheral nervous system, must be discarded. Whether time will prove that the conclusions of the authors are correct cannot be told; but this much is certain, that fewer men accept the neuron theory now than two years ago. The authors are to be congratulated on their work. There is no padding. The descriptions of the conditions found are brief and clear. The book is well made; the illustrations excellent.

C. W. B.

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AN EXPERIMENTAL AND CLINICAL RESEARCH INTO CERTAIN PROBLEMS RELATING TO SURGICAL OPERATIONS. An Essay Awarded the Alvarenga Prize for 1901 by the College of Physicians of Philadelphia. By GEORGE W. CRILE, A.M., M.D., Ph.D., Professor of Clinical Surgery, Medical Department, Western Reserve University; Surgeon to St. Alexis' Hospital; Associate Surgeon to Lakeside Hospital, Cleveland. Philadelphia: J. B. Lippincott Co., 1901.

THIS essay comprises an experimental and clinical research into certain subjects suggested by the writer's practical experience in the operating-room, and includes a study of the effects of severing and mechanically irritating the vagi, the effects of the intravenous infusion of salt solution, the physiological action of cocaine and eucaïne, and the effects of temporary closure of the carotid arteries. The experiments were conducted on dogs, cats, and frogs, and extended over a period of three years. The author first reviews the literature of the subject under discussion, then sets down the details of the experiments, and finally points out the practical application of the results of the study, and gives a number of clinical histories to fortify the conclusions reached. The phenomena noted in the laboratory closely corresponded with those met in the operating-room.

Crile finds that no amount of mechanical irritation, even to the extent of destroying the vagi, is sufficient to arrest the heart's action, and that severing one vagus has practically no effect on respiration or circulation. He demonstrates that the blood pressure can be raised little if at all above the normal by the intravenous injection of salt solution, owing to its rapid escape from the vessels and to the automatic action of the medulla. When peripheral resistance is lost, as in fatal shock, no amount of infusion can do more than temporarily restore the blood pressure, and death is inevitable. It is interesting to note that Crile was able to amputate at the shoulder-joint in a woman, seventy-four years of age, without shock or hemorrhage, by employing one-eighth grain of cocaine in solution injected into the brachial plexus. Eleven operations about the head are recorded, in which the annoyance and danger of hemorrhage were entirely obviated by the application of a